

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 11 to 20.

The above amendment to claim 11 is presented to more clearly point out the invention.

The above amendment to claims 18 and 20 is responsive to the rejection under 35 U.S.C.

112. The rejected terminology no longer appears.

In this regard, the term "an epichlorohydrin-based chemical" in claim 20 has been amended to read "an epichlorohydrin-group containing chemical". It is considered that such an amendment is supported by the paragraph [0031] of the original specification. Namely, in this paragraph, there are described "fatty acid modified by an epichlorohydrin-based chemical" and "Here, modification by epichlorohydrin not only means simple introduction of an epichlorohydrin group to fatty acid . . .".

By these descriptions, it is apparent that the term "an epichlorohydrin-based chemical" means "an epichlorohydrin-group containing chemical".

As to the amendment of the term "an epichlorohydrin-based crosslinking agent" to read "an epichlorohydrin-group containing crosslinking agent" in claim 18, it is also considered that such an amendment is supported for the same reason as described above.

Claims 11 to 13, 16 and 18 to 20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Billmers et al. (U.S. 2002/0015854).

This rejection is respectfully traversed.

Billmers et al. relates to a paper coating composition providing good barrier properties comprising a blend of hydrophobically modified high amylose starch and polyvinyl alcohol. However, Billmers et al. neither disclose nor suggest the use of a crosslinking agent for crosslinking the hydrophobically modified high amylose starch. On the contrary, in the present invention, the crosslinking agent for crosslinking the hydrophobized starch is an essential component.

The advantageous effects of the crosslinking agent in the present invention are described in paragraph [0021] on pages 9 and 10 of the present specification. Additionally, there is comparative data wherein the case of "hydrophobized starch + crosslinking agent" [Example 1] and "hydrophobized starch only" [Comparative Example 1] are compared. See page 38.

"Barrier properties" of Billmers et al. include porosity reduction to air. (See paragraph [0002] of Billmers et al.) This means that the coating composition of Billmers et al. increases the resistance to air permeability. On the contrary, the present invention can provide, by crosslinking the hydrophobized starch, an oil resistant sheet material having low resistance to air permeability and excellent in oil resistance. (See paragraphs [0010] and [0021]). Due to the low resistance to air permeability, the oil resistant sheet material having good moisture permeability and good resistance to package breakage can be obtained. Such a low resistance to air permeability of the sheet material of the present invention is opposite to that of the paper obtained by using the coating composition of Billmers et al.

Accordingly, Billmers et al. neither disclose nor suggest the oil-resistant sheet material of the present invention in which a coating layer containing a hydrophobized starch and a crosslinking agent for crosslinking the hydrophobized starch is formed at least one side of a substrate.

Claims 14, 15 and 17 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Billmers et al. (U.S. 2002/0015854) in view of Reiners et al. (U.S. 6,090,871).

This rejection is also respectfully traversed.

The rejection contends that it would have been obvious to a skilled person to add a fatty acid as taught by Reiners et al. to the coating composition "hydrophobically modified high amylose starch + polyvinyl alcohol" of Billmers et al. to thereby improve the dry and wet strength of paper.

However, since Billmers et al. do not disclose or suggest the use of the crosslinking agent, the coating layer composition as claimed in claims 14 and 15 and the internally added composition as claimed in claim 17 of the present application in which the crosslinking agent is an essential component, cannot be taught, even by combining the teachings of Billmers et al. and Reiners et al.

Reiners et al. further disclose that polyamine-epichlorohydrin resins and polyamide-amine-epichlorohydrin resins have been employed for a long time for improving the dry and wet strength of paper. However, Reiners et al. neither disclose nor suggest that these resins are used to crosslink the hydrophobized starch and that the sheet material having low resistance to air permeability and excellent in oil resistance can be obtained by using the hydrophobized starch crosslinked by the crosslinking agent.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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